

---

*Integrity - Service - Excellence*

# ***WMD ER Program Update***

## ***Part I: Medical Update***



**U.S. AIR FORCE**

Capt Bob Campbell  
DSN 574-1284  
HQ ACC/SGPB  
Chief, Medical  
Counterproliferation  
Office of the Command  
Surgeon  
[Robert.campbell@langley.af.mil](mailto:Robert.campbell@langley.af.mil)



**U.S. AIR FORCE**

---

# ***Introduction***

- **WMD ER MEFPAK**
- **Drivers**
  - **Program origination**
  - **Doctrine**
- **Present status - Doctrine, Equipment, Training**
  - **886A - Patient Decon**
  - **886B - Lab Response Team**
  - **886C - Immediate Medical Response**
  - **886E - Pharmaceutical**
- **Exercises**
- **Other FY04/05 Efforts/Initiatives**



**U.S. AIR FORCE**

---

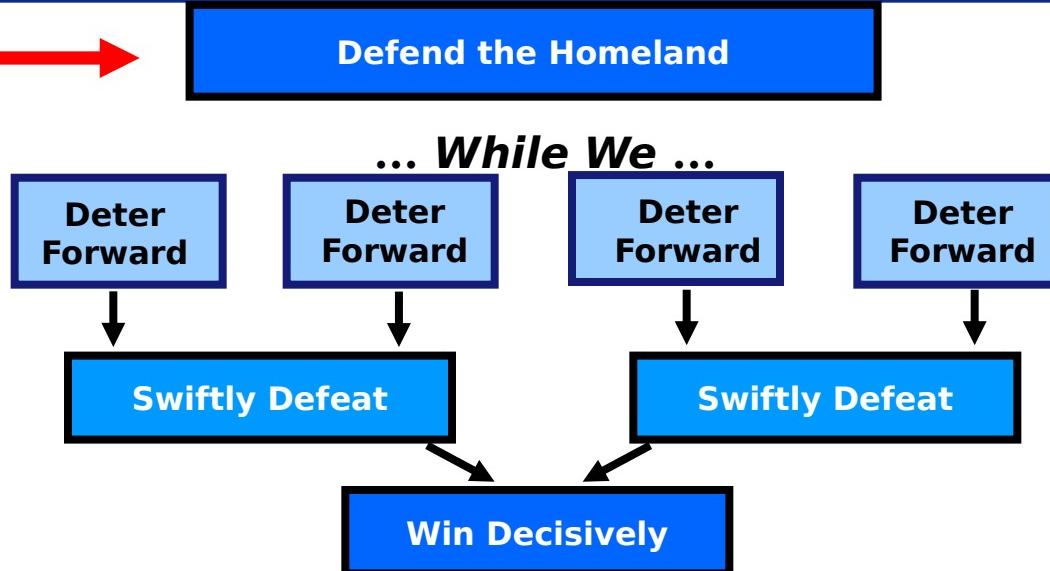
# **MEFPAK Role in HLD**

- **Manpower and Equipment Force Packaging (MEFPAK)**  
*Oversee development of MANFOR/LOGFOR, allowance standards, and tactics, techniques, and procedures*
- ACC/SG is the MEFPAK for WMD Program (AF/SG Itr 8 Jul 02)
- ACC/SGPB is OPR
  - Draft WMD CONOPs
  - Register allowance standards
  - Identify manpower and training requirements
  - Establish an inspection/audit trail
- Existing pilot programs: Test CONOPs, equipment, training
- ACC/SGPB acts as AF lead by coordinating program initiatives with MAJCOMs, AFCESA, AFIOH, and Air Staff



**U.S. AIR FORCE**

# **Drivers**



**QDR Guidance...** "The highest priority of the US military is to defend the Nation from all enemies"

**"Our first priority is to protect the US."** - 2004 NMS



**U.S. AIR FORCE**

# ***AFMS Response Capabilities***

- **Procured Materiel in FY03; being delivered throughout FY04**
  - Aug 99 - Dec 01 SECDEF PDM 1 and PBD 289
  - Jan 02 PBD 736 Added \$42.7M to FY03
- **Training and exercises: FY04-FY05**
  - **\$9.6M GWOT in FY04**
- **CONOPS: Installation/Local response, 1<sup>st</sup> 24 hours, 300 patients**
  - **Patient Decontamination (886A)**
  - **Laboratory Response (PCR technology) - at 52 bases (886B)**
  - **Immediate/Emergency Medical Response (886C)**
  - **Enhanced In Patient Capability - at 12 bases (886D)**
  - **Pharmaceutical Support (886E)**
  - **Threat Agent Surveillance (886H)**



# Employment Options

U.S. AIR FORCE

---

- Prepare with community for integrated response
  - Not always an “incident scene”
  - On/Off installation - MOU/MOA with community responders
- Immediate Response On Base
  - Response will be Bigger than on base resources
  - Need to look outside the gate vs. within service
- Immediate Response Off Base
  - When requested...unique assets...community partner
  - Example: Peterson AFB has MOU with Springs and Colorado



In t

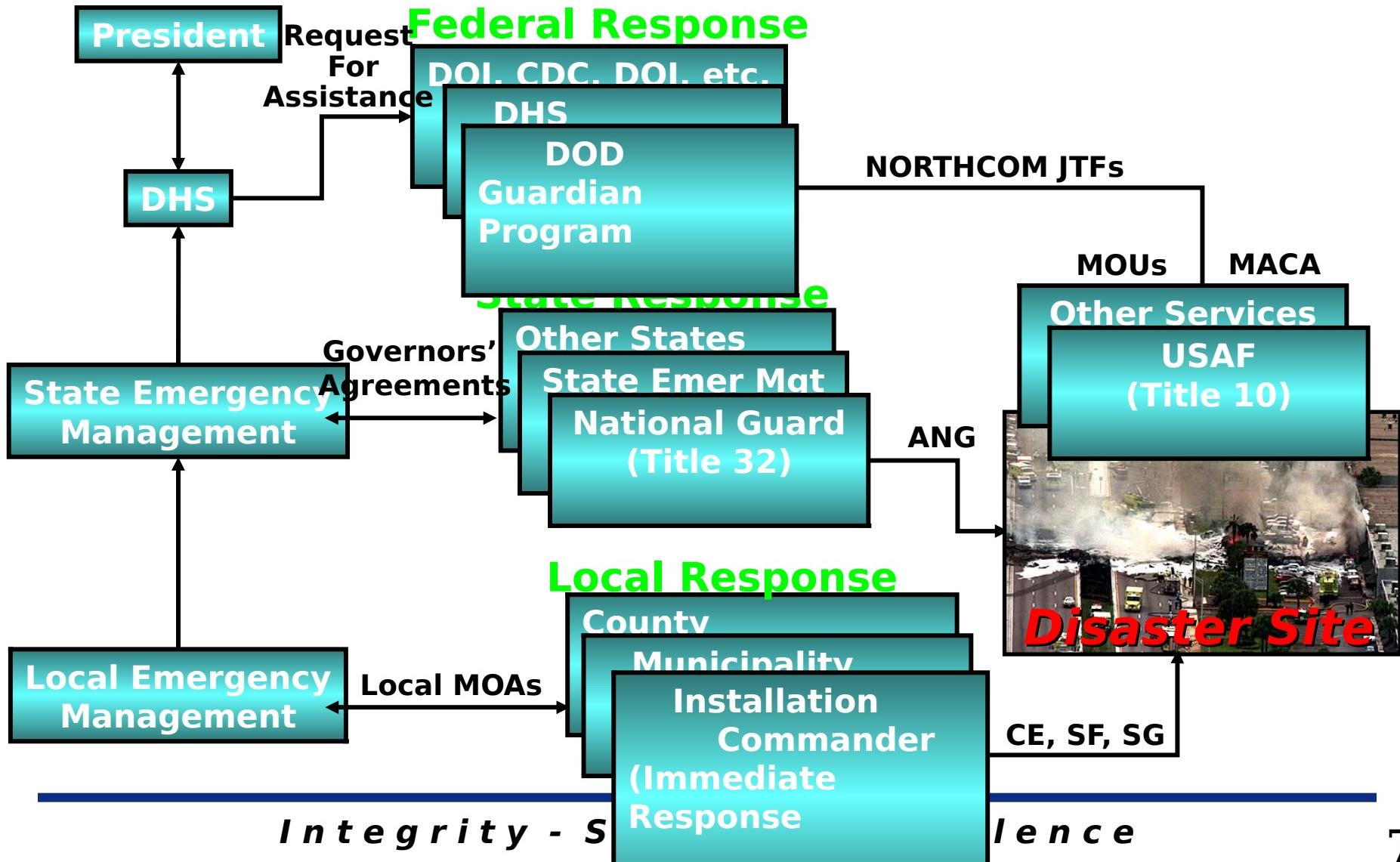
Deter, Prevent, Defeat

n c e



# Employment Options

U.S. AIR FORCE





**U.S. AIR FORCE**

---

# **Doctrine**

- AFTTP 3-42.32: Home Station Medical Response to Chemical, Biological, Radiological, Nuclear, or High-Yield Explosives (CBRNE) Events -  
**Capabilities-based Response** -- <https://www.afms.mil/sg/index.htm>
  - Conduct Disease Surveillance
  - Vulnerability Assessments/ Intelligence
  - Capability Assessment
  - Maintain Response Equipment and Supplies
  - Recognize, Detect, and Identify CBRNE Agents
  - Secure/protect MTF and Personnel
  - Perform Health Risk Assessment and Communication
  - Triage CBRNE Casualties
  - Decontaminate Casualties at the MTF
  - Diagnose and Treat CBRNE Casualties
  - Integrate Response Effort with Follow-on Teams

Casualty  
Prevention

Casualty  
Management



**U.S. AIR FORCE**

# **WMD Assets at AF Installations**



**Major Active-Duty  
Air Force Installations**



# Patient Decontamination

U.S. AIR FORCE

## Description

- 2 Lane Expandable Tent
- Supplies: heater, bladder, litter roller, wet/dry vac, and medical accessories
- PPE: Level C with PAPRs
- Training: 2 Day course w/Tabletop exercise
- Operational in 10-20 minutes



## AS 886A Issues

- Fire department decon inconsistent
- How clean is clean?
  - Simulants in training
- First Receivers - training, PPE certification
- Who is required to be trained?
  - Turn-over
- MDG appointment

## Update

- FY05 training refresh
- Revised guidance/TTP, incorporating OSHA guidelines
- Decon pavillion pilot project: Offutt AFB, NE
- Add training PPE to AS



*Integrity - Service - Excellence*



# Clinical Laboratory

U.S. AIR FORCE

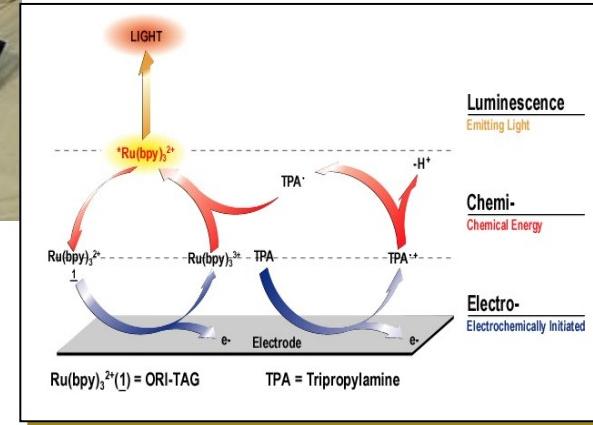
## Description

- Disease surveillance, biological threat agent identification to support operational decisions
- Polymerase Chain Reaction - 52 AFBs

- 14 pathogen assays

- Electrochemiluminescence - 24 AFBs
- 3 Toxin assays

- Analyses of food/environmental samples
- Handling environmental samples in/out of medical facility
- Integration with Lab Response Network
- Prioritization of additional probe development efforts
- JBAIDS fielding plan and integration
- Field operational testing



## Update

- Sep 04 fielding of M1M instruments
  - Integrate training with RAPID training
  - Future assay enhancements
- Sample collection/handling study
- Tailoring probe set to align w/threat and reducing expiration on the shelf
- Update/revising CONOPS/TTP
- Proficiency testing started in Jun 04

*Integrity - Service - Excellence*



# Lab Response Team

U.S. AIR FORCE

- Ruggedized Advanced Pathogen Identification Device (RAPID)
  - Polymerase Chain Reaction Technology
  - Identifies 14 Pathogens (Several Probes Each)
  - Several More Under Development
- Part of Lab Response Network
- 52 AFBs
- Tailored Set of Probes Based on Threat

## BW Probes

Anthrax

Yersinia pestis

Francicella tularensis

Brucellosis

Variola

Glanders (B. mallei)

Alpha viruses

CCHF

## Clinical Agents of Significance

Salmonella (2)

Streptococcus

pneumoniae

E. coli (2)

Vibrio cholera

Campylobacter species

Dengi, West Nile Virus

Shigella

Influenza

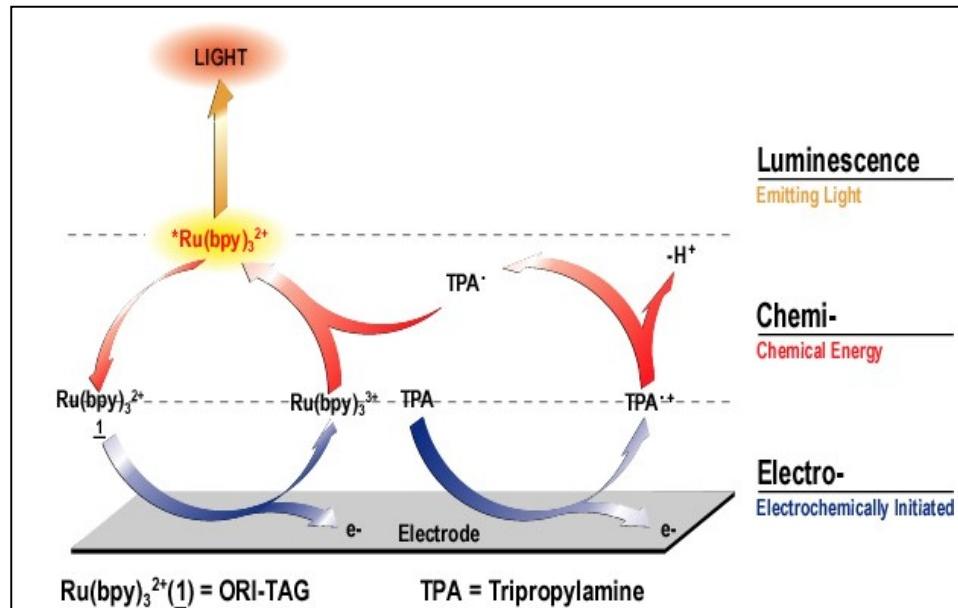




# Lab Response Team

U.S. AIR FORCE

- M1M: Electrochemiluminescence (ECL) - 24 AFBs
- Identifies Toxins and Pathogens
- Extremely low limit of detection
- Analysis in 15 minutes
- Complements RAPID, HHA
- Future:
  - DNA assays
  - Enzyme assays
  - RNA assays
  - Immuno assays
- Impact: multiple methods for identifying BWA





**U.S. AIR FORCE**

# *Patient Treatment*

## Description

- Medical supplies to treat 300 CBRNE casualties
- Supplements existing disaster teams with mobile supplies, PPE, and security
- ACLS Mannequins



## Issues

- Requirements for PPE
- Posturing equipment for response
- Training and Exercises

## Update

- FY05 Bag packing where requested
- FY05 Training and TTX AF-wide
- Revised/clarify employment guidance/TTP
- Adding training PPE to AS



**U.S. AIR FORCE**

# **Pharmacy Support**

## **Description**

- Scalable package to prophylax/treat 300 CBRNE casualties for 24 hours
- 3 Increments
  - Clinic
  - Hospital
  - Counter radiological



## **Issues**

- Suite of counter radiological drugs
  - FDA approvals for Radiogarse, etc.
- Mass prophylaxis plans lacking
- Integration with community plans for Strategic National Stockpile access

## **Update**

- None



**U.S. AIR FORCE**

# **Exercises**

- **Decontamination Training TTX**
- **Immediate Medical Response Training TTX**
- **Texas A&M Engineering Extension (training, TTX, FLDX)**
- **Code Silver**
  - **Team building exercise**





U.S. AIR FORCE

**CODE SILVER**

# **Objectives/Participants**

## **Participants**

- Medical Disaster Team Chiefs - Medically centric
  - Installation IRE/DCG Representatives
  - Community Representatives
- 
- Objectives - stress you without white flag!
    - Identify Plan Shortfalls/LIMFAC
      - Base records action points
      - Base prioritizes and works
    - Cultivate/Mature Relationships
    - Sustainment training tool left
    - Focus on consequence mgt
  - Not focused specifically on exercising command and control



**No-Fault exercise, general issues compiled/forwarded**



**U.S. AIR FORCE**

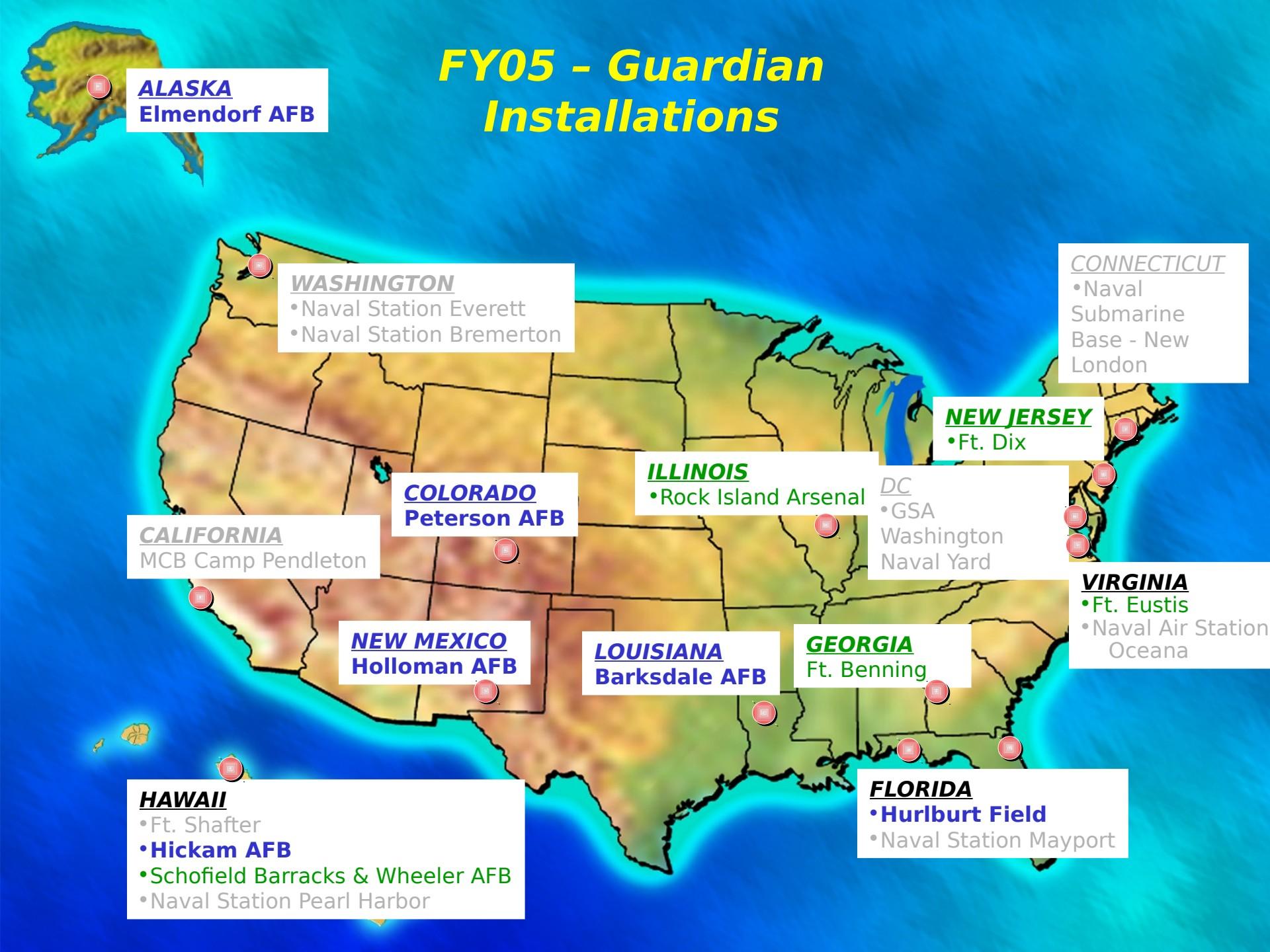
---

# **DoD Guardian Program**

- Installation Training and Exercise Program (ITEP)
- Response equipment suite
  - Requirements, specific equipment set, CONOPS...not clear yet
  - SGPB working w/AFMSA to transition from WMD to Guardian
- Funding for first two years through FY11, fenced
- SGPB position: Supplement existing capabilities, plus up any gaps, and execute exercises
  - AFMSA directing MAJCOMs to provide medical liaison for each installation exercise - 3 weeks per installation

# FY04 - Guardian Installations





# FY05 - *Guardian* Installations

**ALASKA**  
Elmendorf AFB

**WASHINGTON**  
• Naval Station Everett  
• Naval Station Bremerton

**CALIFORNIA**  
MCB Camp Pendleton

**COLORADO**  
Peterson AFB

**NEW MEXICO**  
Holloman AFB

**HAWAII**  
• Ft. Shafter  
**Hickam AFB**  
• Schofield Barracks & Wheeler AFB  
• Naval Station Pearl Harbor

**ILLINOIS**  
• Rock Island Arsenal

**DC**  
• GSA  
Washington Naval Yard

**LOUISIANA**  
Barksdale AFB

**GEORGIA**  
Ft. Benning

**FLORIDA**  
**Hurlburt Field**  
• Naval Station Mayport

**CONNECTICUT**  
• Naval Submarine Base - New London

**NEW JERSEY**  
• Ft. Dix

**VIRGINIA**  
• Ft. Eustis  
• Naval Air Station Oceana

# FY06 - *Guardian* Installations



## **WASHINGTON**

- McChord AFB
- Naval Air Station Whidbey Island

## **CALIFORNIA**

- Naval Weapons Station Seal Beach
- Sierra Army Depot
- Naval Base Coronado

## **ARIZONA**

- Davis-Monthan AFB
- Luke AFB

## **NEBRASKA** **Offutt AFB**

## **MISSOURI** NIMA Arnold

## **NEW MEXICO** **Kirtland AFB**

## **KANSAS** Ft. Riley

## **TEXAS** Red River Army Depot

## **NORTH CAROLINA**

- Naval Security Group Activity Sugar Grove

- MCB Camp Lejeune, NC/MCAS New River
- Pope AFB

## **ALABAMA**

- Anniston Army Depot
- Redstone Arsenal

## **GEORGIA** Ft. Stewart

## **NEW JERSEY**

- McGuire AFB
- Naval Weapons Station Earle

## **MARYLAND**

- Ft. George G. Meade

## **WASHINGTON DC**

- DISA-WHCA-White House
- Naval District Wash

## **VIRGINIA**

- Ft. Belvoir
- Naval Amphibious Base Little Creek

## **SOUTH CAROLINA**

- MCAS Beaufort
- Shaw AFB

## **FLORIDA**

- MacDill AFB
- Naval Air Station Jacksonville



**U.S. AIR FORCE**

# ***Other FY04 Initiatives - Doctrine, Management***

- Update AFTTP 3-42.32 with AS employment guidance (interim)
  - Integrating 7 CONOPS into one TTP
- PEM/POM: FY04 GWOT Initiative -- \$9.6M; \$25M POM over FYDP
- Cross-functional program reviews and audits (IG, HSI Criteria)
- Enhancing AFIOH and manufacture reachback support
- Lead ACC cross-functional WMD working group
  - Rewrite/draft AFIs: 10-2503, 10-2501
- Equipment Optimization Projects - Leading multi-service effort
  - Contract oversight of \$2M projects to calibrate/enhance WMD equipment
  - Partnering with other agencies, services, coalition partners to develop international standards for CBRNE response



U.S. AIR FORCE

# *Other FY04 Initiatives - Training/Exercises*

- **Training: Food security, Decon, HAPSITE, other equipment**
  - Coordinating contracts and schedules with bases
  - Audit training to ensure consistency with overall program
- **Immediate Medical Response (886C) training**
  - Battelle/AFIOH developing course
  - One-day training and TTX for clinical team chiefs/alternates
- **Continue Code Silver; 43 bases in CY03-04; 45 bases in CY05**
  - Team with L-3 to design/facilitate TTXs at all AFBs
  - Piloting new scenarios Nov/Dec 04
- **Implement proficiency testing (HAPSITE, HAZMAT ID, RAPID)**
  - Established joint standard; oversight of results



**U.S. AIR FORCE**

---

# **FY05 Efforts/Initiatives**

- **Food Vulnerability Assessment**
- **In-line water distribution monitoring**
- **Sustain existing equipment - team chiefs and medical logistics**
- **Forming UTCs - still investigate issues and benefits**
- **Future of Code Silver and Installation Training and Exercise Prgm**
- **Pilot unit support - Review/Update all TTPs and AS**
- **Decon pavilion evaluation and programming for future**
- **APOM**
- **Expand partnerships with other agencies/services**
  - **Joint Preventive Medicine Equipment Sub-Group**
  - **Product optimization**



U.S. AIR FORCE

## ***Part II: BEE Update and Metrics***

- **BEE Integration into FSTR**
- **Threat Agent Surveillance update**
- **Optimization Efforts**
- **NIMS**
- **FSTR and Medical WMD ER Metrics**



U.S. AIR FORCE

# *General Clarification of Roles*

- Reviewed 10-, 32-, 41-, and 48- series documents to identify vague/overlapping roles between BEE and CEX
- Incorporating clarification into 10-2503
- Aligning in-garrison and deployed responsibilities
- Eliminating distinction among N/B/C
- SGPB is OPR for hazard and health effects info
- CEX is OPR for incident management
- SGPB responsible for CCA Health Risk Assessment
- Monitoring: active sample collection, not hand-held DRI



**U.S. AIR FORCE**

# ***Clarifying 10-2602 Deployed***

Role <sup>1</sup>	CEX	SGPB	Other	Comment
Command and Control	X			Tables A3.1, A3.7, A3.8
Initial Detection	X <sup>2</sup>	x		Tables A3.1, A3.7, A3.8
Detection/Identification/Quantification		X		Tables A3.1, A3.7, A3.8
NBC Sample Plan Development <sup>3</sup>	x	X		Table A3.1
NBC Sample Collection <sup>3</sup>	x	X		Table A3.8
NBC Sample Handling/Packaging <sup>3</sup>	x	X		Table A3.8
NBC Sample Preservation/Shipment <sup>3</sup>	x	X		Table A3.8
De-MOPP Action	x	X		Table A3.8
Establish MTF Detection System	X	x		Table A3.1
Provide Detailed Assessments	X	x <sup>4</sup>		Table A3.1



**U.S. AIR FORCE**

# *Clarifying 10-2602 In-Garrison*

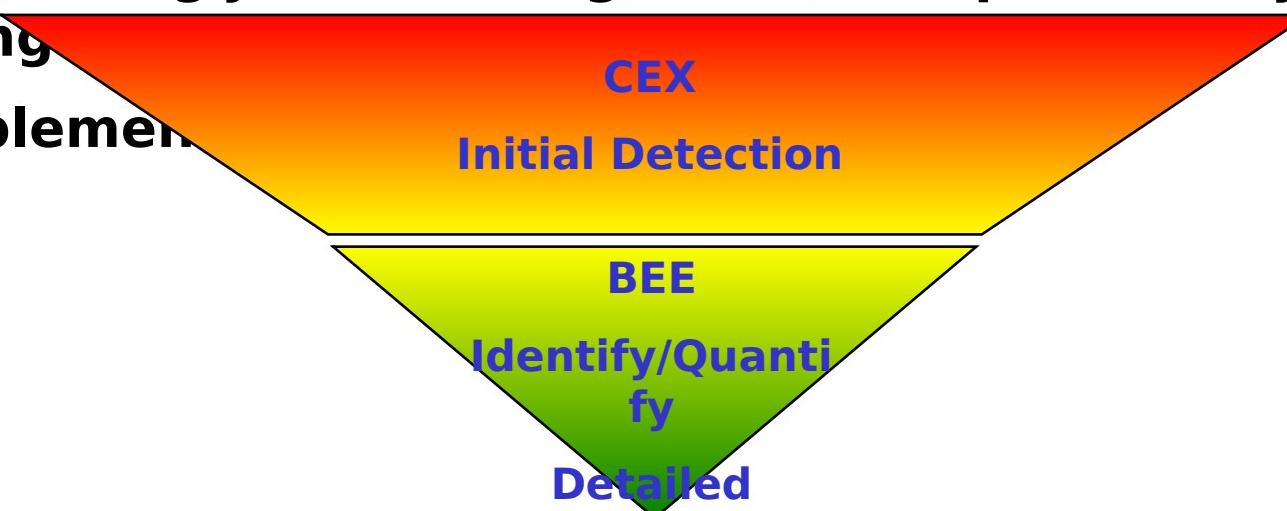
Role <sup>1</sup>	CEX	SGPB	Other	Comment
Command and Control	X			
Initial Detection	X <sup>2</sup>	x		
Detection/Identification/Quantification		X		
Response Support Agreements	X			
Monitoring		X		Defined <sup>5</sup>
Radiation				Roles delineated <sup>6</sup>
CCA Operations	X <sup>7</sup>	x <sup>8</sup>		BEE Health Risk Assess.
Downwind Hazards / Toxic Corridors	X	x <sup>9</sup>		BEE knowledge
Evacuation Plans	X	x		
HAZMAT/Waste Collection/Removal			X	CEV via contract
PPE		X		
IPE	X <sup>10</sup>	x		MOPP declaration



U.S. AIR FORCE

# Equipment

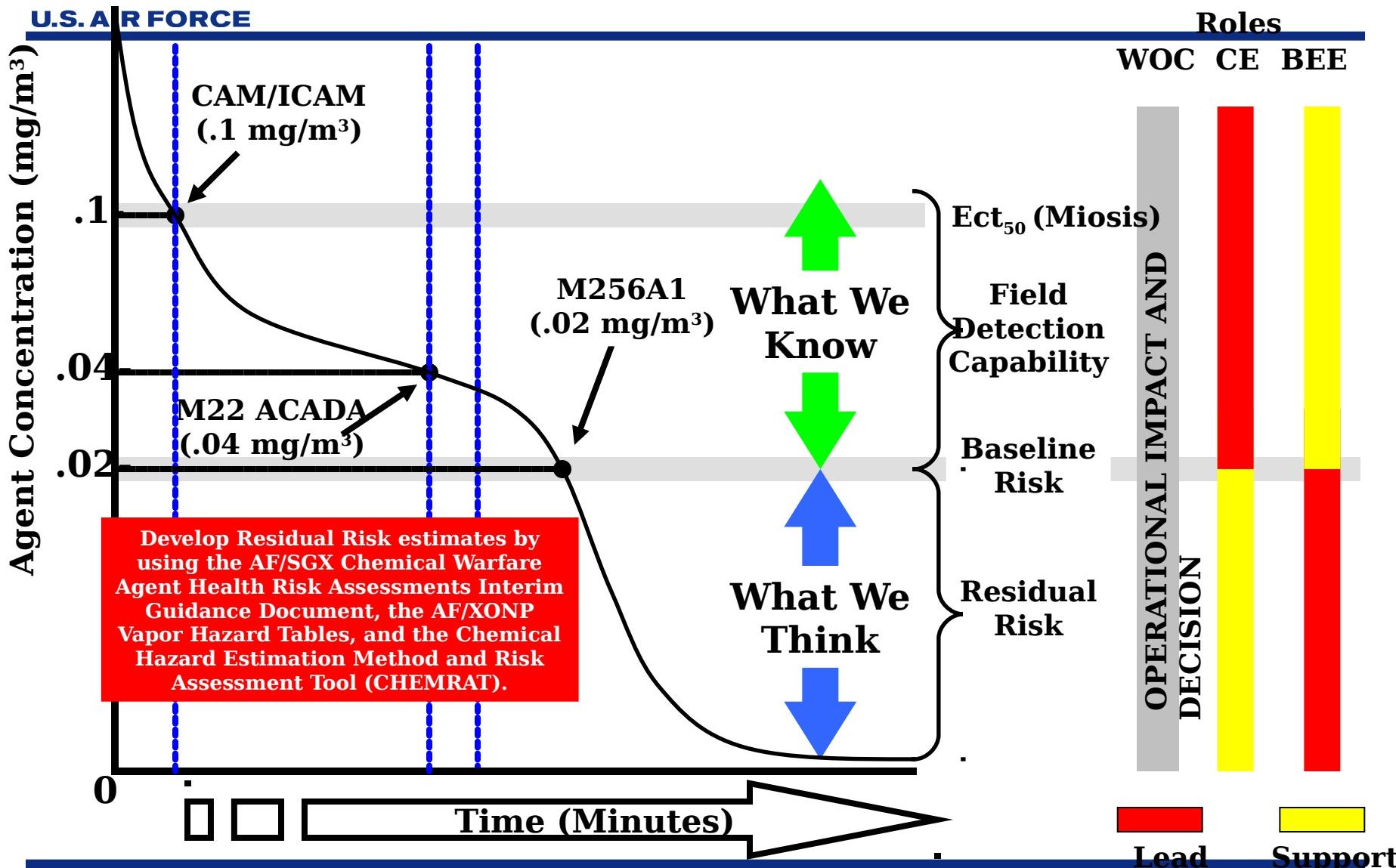
- Standardizing In-garrison and deployed equipment sets
  - Minimize training, logistics tail
  - Allowance Standards: WMD ER Program, Medical NBC team
- Establishing joint training, TTPs, and proficiency testing
- Complement





# VX Vapor Detection Baseline\* Analysis

\*Does not address HAPSITE capabilities





**U.S. AIR FORCE**

---

# ***Partnering with your CEX***

- **Understand their mission - Health Risk Assessment**
  - **AFI 10-2501, AFI 10-2503 (draft)**
  - **Hang out with a CEX for a few hours**
- **Train together**
  - **At least quarterly**
  - **Equipment**
  - **Response/Deployment ops**
  - **Define key interfaces (information hand-offs)**
- **Exercise together (Code Silver, etc.)**
  - **In garrison**
  - **Deployed**
- **Identify CEX and BEE limitations**



U.S. AIR FORCE

# Full Spectrum CBRNE Threat Agent Surveillance

## Description

- Provide identification and quantification of CBRNE hazards
- Rapid health risk assessment
- Enable operational decisions
- Partners with CEX (Initial detection and plume modeling)



## Issues

- Interface with clinical laboratory; sample collection procedures
- Limitations of equipment
- Sustainment Training
- Resolving DLA contract shipping discrepancies

## Update

- New methods, libraries, and guidance
  - Oversight on 3 multi-service contracts
- Fielding upgrades for HAPSITE
  - Refresh on basic HAPSITE training and some advanced training
  - Implementing proficiency testing
- 1<sup>st</sup> update to AS underway



**U.S. AIR FORCE**

---

# **BEE Update**

- **886H Shipment Resolution...coming soon!**
  - **Thank Ed!**
  - **Overshipments being re-routed to Shortages**
  - **Lost in the Mail being reshipped**
  - **One Pallet...to the BEE direct**
- **Proof of Delivery (PODs)**
  - **Ask your loggies**
  - **Address with CC**
  - **Guidance should be coming if unresolved**



**U.S. AIR FORCE**

---

# **BEE Update**

- **886H Revisions and updates**
  - Sampling vials, IATA container, LED headlamps, Evidence tape, etc.
  - Looking into HAZTECH systems WMD kit and wireless COM
  - Critical item codes
- **Guidance: 886H Employment guidance >>> AFTTP 3-43.32 rev**
  - Possible template MCRP annexes w/essential items
- **Training**
  - HAPSITE basic course coming to you in FY05
  - HAPSITE advanced course: 2 per base, prerequisites
  - HAZCAT and SAM935 ...let me know if you are interested
- **Exercises**
  - Code Silver: 8 ACC bases
  - ITEP (Guardian): Langley, Barksdale, Holloman



**U.S. AIR FORCE**

---

# **Optimization Efforts**

- HAPSITE upgrade with SMART software and extended service
- HAZMATID bio-library: T2, strichnine, aflotoxin, anthrax spore, *ricin, botox*
- Proficiency testing: quarterly
  - HAPSITE, HAZMATID, soon will add SAM935
- HAPSITE tribed concentrator, 90+calibration curves, TIC methods
- HAZMATID, HAPSITE, XMX, SAM 935 CONEXs

**Ask me about in-line water monitors!**



**U.S. AIR FORCE**

# **THE JOINT PREVENTIVE MEDICINE EQUIPMENT SUB-GROUP (JPMESG)**

- **Executive Members (Policy)**
  - **Voting Members:**
    - USACHPPM
    - NEHC
    - HQ ACC/SGPB
- **Extended Members (Technical)**
  - **Voting Members:**
    - MARCORSYSCOM
    - PM WMD-CSS
    - NGB
    - AFIOH
    - NEPMU (2 & 5)
    - CBIRF
    - United States Army Medical Material Development Agency (USAMMDA)
    - US Army Forces Command
    - U.S. Army AMEDD C&S, Directorate of Combat and Doctrine Development
    - Joint Staff J-4, Medical Readiness Division
- **Partners**
  - **Non-Voting Members:**
    - USA Chem School
    - Brooks Schoolhouse
    - USCG National Strike Force
    - NNMC
    - USUHS
- **Others**
  - **Non-Voting Members:**
    - Porton Down
    - Canadian Forces
    - By special invitation (i.e. manufacturers, contractors)



# Equipment Optimization

U.S. AIR FORCE

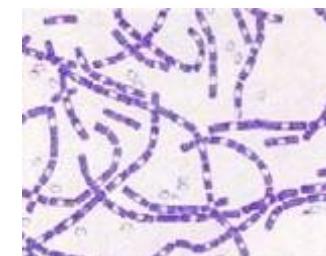
- HAPSITE® Testing - Product enhancements:
  - WMD-CST
- HAPSITE® Optimization - Calibration curves:
  - Marine Corps
  - Navy Environmental Health Center
- HazMatID® Optimization - Toxins/Anthrax:
  - Air Force
- HAPSITE®/HazMatID®  
Course Curriculum Development
- Proficiency in Testing Quality Assurance Program  
(Proficiency Analytical Test (PAT) Rounds):
- USUHS Student Projects:
  - Hapsite/SPME
  - Hapsite Transportability of Cal Curves Project
  - **HazMatID Pesticide Library Development**
  - Hach DR 4000 Project

• AF

• Navy

• AF  
• Navy

• AF  
• Navy



• FPAE  
JSWG

• AF  
• CBIRF  
• Navy  
• NGB (CSTs)

• USAF  
• USN  
• USA

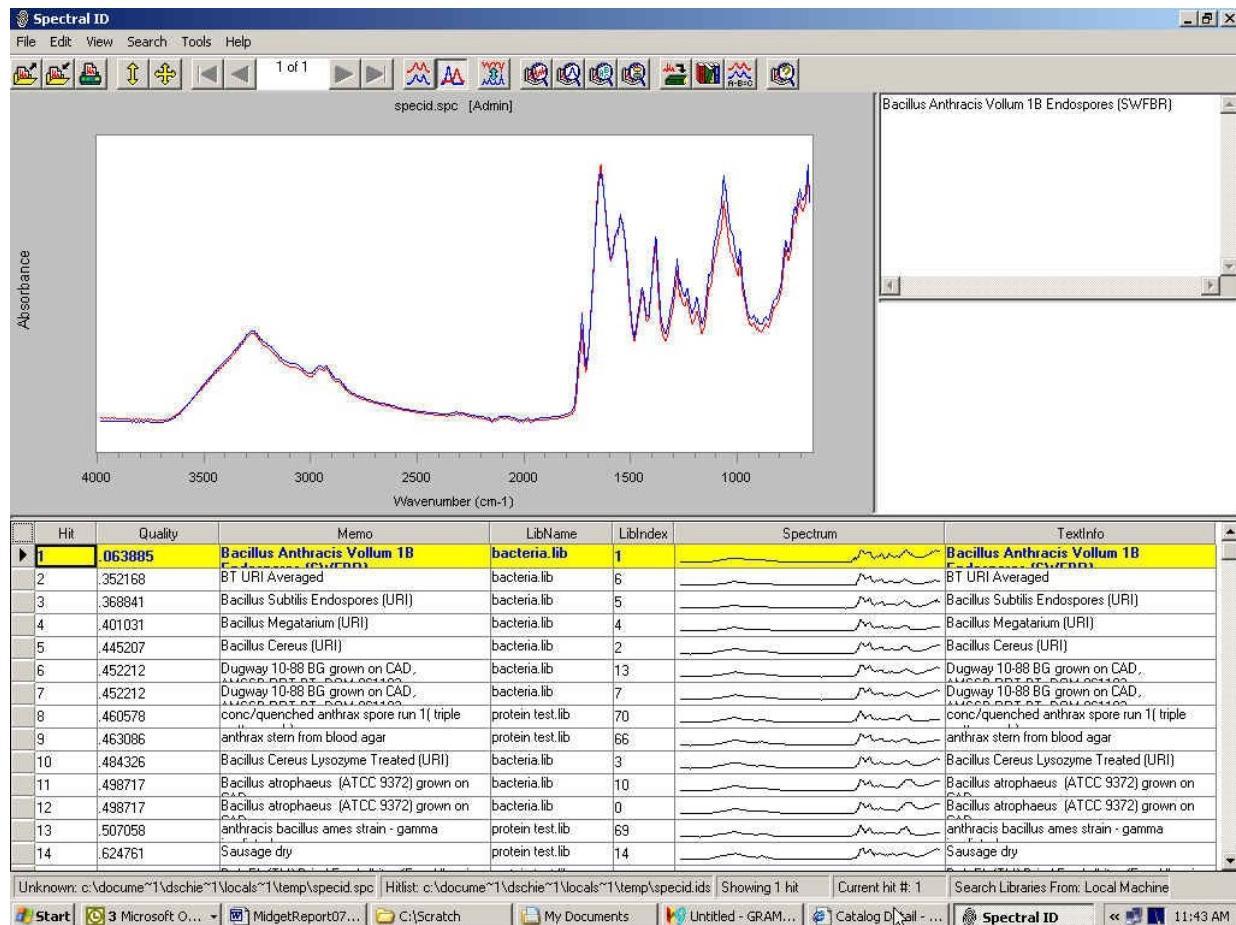


**U.S. AIR FORCE**

# *Bacillus Anthracis Volum 1B*

## *Endospores*

### *IR Spectral Library Search Evaluation*



**First Derivative  
Normalized Dot Product  
Search**

**~30,000 spectra**

**23 samples**

**Scores =  
.89123 ± .048**

**Nearest Neighbor  
Scores =  
.65765 ± .049**

**> 3 STD discrimination**



**U.S. AIR FORCE**

# *National Incident Management System*

- **National Standards for Emergency Response**
  - Equipment
  - Training
  - Certification
- **DOD Adopting National Standards**
- **Air Force Medical Service**
  - Anticipating, setting, and implementing
  - HAPSITE, HAZMATID, and RAPID proficiency testing
  - Adopting NFPA standards for PPE and medical response
  - Developing multi-service training products and standards





**U.S. AIR FORCE**

---

# ***Metrics briefing***



**U.S. AIR FORCE**

---

# **Questions?**

- “**Defending our nation against its enemies is the first and fundamental commitment of the Federal Government.**” - NSS
- “**Our enemies have openly declared that they are seeking weapons of mass destruction, and evidence indicates that they are doing so with determination.**” - NSS
- “**... the number of possible “wild cards” make it more likely that at least one of them will occur with disproportionately high consequences.**” - 1997 National Military Strategy
- “**The highest priority of the US military is to defend the Nation from all enemies.**” - QDR
- “**DOD must bolster its ability to work with the organizations involved in homeland security to prevent, protect against, and respond to threats to the territorial United States.**” -- QDR
- “**Our first priority is to protect the US.**” - 2004 NMS